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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/219,775	12/23/1998	DONALD RAYMOND LATURELL	EL-KIK-627-7	4348

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EXAMINER
PHAN, TRI H

ART UNIT	PAPER NUMBER
2661	6

DATE MAILED: 12/21/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/219,775	Applicant(s) LATURELL ET AL.	
	Examiner Tri H. Phan	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 1998* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities:

In claim 1, applicant is respectfully suggested to be consistent in using terminologies, for example, "master device" or "master timing device"; and "codec" or "codec device". I interpret the claim language as referring to --- master device --- and --- codec ---for the purpose of further examination on the merits.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 12 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 12 and 16 recite the limitation "synchronization" in Page 17, Line 23 and Page 18, Line 17. There is insufficient antecedent basis for this limitation in the claims. The "synchronization" is not defined within Claims 12, 16 nor in the parent claim (Claim 10, 14). I interpret the claim language as referring to --- the synchronizing preamble code word --- for the purpose of further examination on the merits.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by **Copperi et al.** (U.S.4,049,917).

In regard to claim 1, **Copperi** teaches a synchronizing data protocol for use in synchronizing timing between a master device (transmitting terminal; Fig. 1) and a codec (receiving terminal; Fig. 4) as claimed, which comprises a preamble insertion module (Frame FT1 Synthesizer of Fig. 1) in the master timing device adapted to insert a preamble code word (e.g. generated by Sync-Code GST Generator of Fig. 1; See Col. 5, Lines 1-16; Fig. 3: See Col.5, Lines 50-68; Col. 6, Lines 1-11) into selected frames in a data stream for transmission (Outgoing line ADPCM_15 (1+2) of Fig. 1) to the codec and a synchronizing preamble detection module (Sync-Code RSR Extractor of Fig. 4) in the codec device adapted to detect a presence of the preamble code word in the data stream (e.g. Sync-Code being extracted from the Sync-Code RSR Extractor of Fig. 4; See Col. 6, Lines 23-39).

In regard to claim 2, **Copperi** further teaches the selected frames are non-contiguous (Outgoing/Ingoing line ADPCM_15 (1+2) of Fig. 1 and Fig. 2).

In regard to claim 3, **Copperi** also teaches the timing in the codec is synchronized based on the timing of the detection of the preamble code word in the data stream (Fig. 4: See Col. 6, Lines 23-67; Col. 7, Lines 1-21).

In regard to claim 4, **Copperi** further teaches control address and data information adapted for transmission with the preamble code word, the control address and data information relating to system parameters in the codec (See Col. 1, Lines 18-30; Col. 2, Lines 42-64; Col. 7, Lines 67-68; Col. 8, Lines 1-5; and based on the definition of Frame in "Newton's Telecom Dictionary" Seventeenth Edition:

> **Frame** 1. A frame is a pocket. It's a generic term specific to a number of data communications protocols. A frame of data is a logical unit of data, which commonly is a fragment of a much larger set of data, such as a file of text or image information. As the larger file is prepared for transmission, it is fragmented into smaller data units. Each fragment of data is packaged into a frame format, which comprises a header, payload, and trailer. The header prepends (prepend means added to the front of) the payload and includes a beginning flag, or set of framing bits, which are used for purposes of both frame delineation (beginning of the frame) and synchronization of the receiving device with the speed of transmission across the transmission link. Also included in the header are control information (frame number), and address information (e.g., originating and terminating addresses). Following the header is the payload, which is the data unit (fragment) being transmitted. Appending the payload is the trailer, which comprises data bits used for error detection and correction, and a final set of framing bits, or ending flag, for purposes of frame delineation (ending of the frame). This frame format, in the broader generic sense, also is known as a data packet. Frame, therefore, is a term specific to certain bit-oriented data transmission protocols such as SDLC (Synchronous Data Link Control) and HDLC (High-level Data link Control), with the latter being a generic derivative of SDLC. In the case of SDLC, a frame is very similar to a block, which would be employed in a character-oriented protocol such as IBM's BSC (Binary Synchronous Communications), also known as Bisync. See also BSC, HDLC, Packet, and SDLC.).

In regard to claim 5, **Copperi** also teaches an interrupt module having an operation based on an alteration of the clock signal from the master device to the codec (See Col. 3, Lines 53-68; Col. 4, Lines 1-4).

In regard to claim 6, **Copperi** further teaches a first clock absence timer in the codec (time base BTR) adapted to detect an absence of the clock signal for at least a predetermined length of time (See Col. 6, Lines 23-39; Col. 7, Lines 3-34).

In regard to claim 7, **Copperi** further teaches a second clock absence timer in the master device (time base BTT) to provide an indication of the predetermined length of time to the master device (Fig. 1; See Col. 3, Lines 18-52).

In regard to claim 8, **Copperi** also teaches the alteration of the clock signal is a non-changing clock signal for at least a predetermined length of time (See Col. 3, Lines 18-52; Col. 5, Lines 61-68; Col. 6, Lines 1-7).

In regard to claim 9, **Copperi** also teaches a buffer (8-bit SR1,4-bit SR2 Shift Register and time base BTR) in the codec adapted to be enabled upon detection of the preamble code word (See Col. 6, Lines 39-65).

In regard to claims 10 and 14, **Copperi** further teaches a method of synchronizing a codec (receiving terminal; Fig. 4) to a serial data bus (Fig. 1: See Col. 4, Lines 41-68; Col. 6,

Lines 12-18, 23-28) as claimed, which comprises providing an interrupt signal to the codec (Fig. 1: See Col. 3, Lines 53-68; Col. 4, Lines 1-4), monitoring a data stream received by the codec for a presence of the synchronizing preamble code word (Fig. 1: See Col. 5, Lines 1-11; Fig. 3: See Col.5, Lines 34-68; Col.6, Lines 1-11) and basing a timing in the codec on a timing of the detection of the synchronizing preamble code word by the codec (Fig. 4: See Col. 6, Lines 23-39).

In regard to claims 11 and 15, **Copperi** also teaches wherein the providing step comprises:

halting a transmission of a clock signal over the serial data bus for at least a predetermined length of time (Fig. 1: See Col. 3, Lines 53-68; Col. 4, Lines 1-24).

In regard to claims 12 and 16, **Copperi** further teaches wherein the synchronization is performed occasionally with respect to a frame signal (Fig. 4: See Col. 6, Lines 23-39).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Copperi et al.** (U.S.4,409,917).

Regarding to claims 13 and 17, **Copperi** discloses all the subject matter of the claimed invention as discussed above, except fails to teach that the "predetermined length of time is at least 25 microseconds". However, such implementation is known in the art. For example, **Copperi** discloses that the sync-code extractor RSR in the receiving terminal detects the synchronization codes based on the timing signal E of the basic 2048-khz frequency from the time base BTR (Fig. 4: See Col. 6, Lines 12-39). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to modify the predetermined length of time as taught in the system by **Copperi** with the motivation being to improve the ability to transfer frames with "the predetermined length of time is at least 25 microseconds".

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fadavi-Ardekani et al. (U.S.6,263,075), **McKinley** (U.S.6,111,924) and **Scott et al.** (U.S.5,870,046) are all cited to show devices and methods for improving the synchronizing data architectures which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan whose telephone number is (703)305-7444. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Olms can be reached on (703)305-4703.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703)872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-3900.

TP

RICKY NGO
PATENT EXAMINER

Tri H. Phan
December 19, 2001